



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,718	01/07/2002	Patrick Chollet	Q66643	2215

23373 7590 03/21/2005  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

ALEJANDRO MULERO, LUZ L

ART UNIT PAPER NUMBER

1763

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/501,718

Applicant(s)

CHOLLET, PATRICK

Examiner

Luz L. Alejandro

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 5/06/04 and 2/24/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0504.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

26

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: the specification does not include the headings of the sections (see the below guideline for the arrangement of the specification). Additionally, note that the specification does not include a brief description of the drawing.

Appropriate correction is required.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.

Art Unit: 1763

- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 1 and 3 (two occurrences) the phrase "of the type"/"type" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "of the type"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

In claim 1, lines 6-7, it is not clear what applicant means by the limitation of "the enclosure (12) is a cylinder generated by rotation around a main axis (A1) of the container (24)".

The use of the word "appreciably" in claim 1-line 8 and in claim 12-line 3 is not clear.

In claim 1, lines 7-9, it is not clear what applicant means by the limitation of "a wave guide tunnel ... which opens into one wall thereof in the shape of a window"

The term "approximately" in claim 9, lines 3 and 4, is a relative term which renders the claim indefinite. The term "approximately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Clarification is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 8 and 10-13 are rejected under 35 U.S.C. 102(a) as being anticipated by Darras et al., WO 99/49991.

Darras et al. shows the invention as claimed including a device for processing the surface of a container, wherein the processing is accomplished by a low-pressure plasma, by excitation of a reaction fluid with microwave electromagnetic waves, and wherein the container is placed in an enclosure 1 made of conductive material, inside of which enclosure, the microwaves are introduced by means of a coupling device,

Art Unit: 1763

characterized in that the enclosure is a cylinder generated by rotation around a main axis of the container, in that the coupling device has a wave guide tunnel 8 having a rectangular cross section, which extends in a direction perpendicular to the axis of the enclosure and which opens into one wall thereof in the shape of a window which, in projection on a plane tangent to the enclosure, is rectangular in shape, the smaller dimension of which rectangle corresponds to its dimension along the direction of the axis of the enclosure, and in that the inside diameter of the enclosure is such that the microwaves are propagated in the enclosure primarily according to a mode in which the electrical field, resulting from the propagation of the microwaves has an axial symmetry generated by rotation; and introducing the reaction fluid into the container in such a way that the processing can be applied to the inner face or the outer face of the container, and wherein in the inside of the enclosure, a cavity 2 is delimited by a wall 3 made of a material that is transparent to the microwaves, and the container 18 is received inside the cavity (see, for example, the abstract and figs. 1 and 4 and their descriptions). Furthermore, note that the apparatus of Darras et al. is used for depositing a material by low-pressure plasma.

Claims 1, 8, and 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Darras et al., US 6,827,972.

Darras et al. shows the invention as claimed including a device for processing the surface of a container, wherein the processing is accomplished by a low-pressure plasma, by excitation of a reaction fluid with microwave electromagnetic waves, and

Art Unit: 1763

wherein the container is placed in an enclosure 1 made of conductive material, inside of which enclosure, the microwaves are introduced by means of a coupling device, characterized in that the enclosure is a cylinder generated by rotation around a main axis of the container, in that the coupling device has a wave guide tunnel 8 having a rectangular cross section, which extends in a direction perpendicular to the axis of the enclosure and which opens into one wall thereof in the shape of a window which, in projection on a plane tangent to the enclosure, is rectangular in shape, the smaller dimension of which rectangle corresponds to its dimension along the direction of the axis of the enclosure, and in that the inside diameter of the enclosure is such that the microwaves are propagated in the enclosure primarily according to a mode in which the electrical field, resulting from the propagation of the microwaves has an axial symmetry generated by rotation; and introducing the reaction fluid into the container in such a way that the processing can be applied to the inner face or the outer face of the container, and wherein in the inside of the enclosure, a cavity 2 is delimited by a wall 3 made of a material that is transparent to the microwaves, and the container 18 is received inside the cavity (see, for example, the abstract and figs. 1 and 4 and their descriptions). Furthermore, note that the apparatus of Darras et al. is used for depositing a material by low-pressure plasma.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1763

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-7 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Darras et al., WO 99/49991.

Darras et al. is applied as above and further discloses that the frequency of the microwaves is 2.45 GHz, but does not expressly disclose the claimed inside diameters of the enclosure and the claimed variations of intensity of the electrical field. However, Darras et al. clearly discloses that the dimensions of enclosure are selected depending on the object to be processed and the coupling mode required (see, for example, page 12, lines 10-16). Therefore, it would have been an obvious choice of design to one having ordinary skill in the art at the time the invention was made to select/optimize the inside diameter of the enclosure as claimed depending on the object to be processed and the coupling mode required, and such limitation would not lend patentability to the instant application absent the showing of unexpected results. Furthermore, the claimed variations of the intensity of the electrical field will be achieved depending on the dimension of the enclosure.

Claims 2-7 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Darras et al., US 6,827,972.

Darras et al. is applied as above and further discloses that the frequency of the microwaves is 2.45 GHz, but does not expressly disclose the claimed inside diameters of the enclosure and the claimed variations of intensity of the electrical field. However,



Darras et al. clearly discloses that the dimensions of enclosure are selected depending on the object to be processed and the coupling mode required (see, for example, col. 6, lines 53-57). Therefore, it would have been an obvious choice of design to one having ordinary skill in the art at the time the invention was made to select/optimize the inside diameter of the enclosure as claimed depending on the object to be processed and the coupling mode required, and such limitation would not lend patentability to the instant application absent the showing of unexpected results. Furthermore, the claimed variations of the intensity of the electrical field will be achieved depending on the dimension of the enclosure.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leprince et al., US 5,063,330.

Leprince et al. shows the invention as claimed including a device for processing the surface of a container, wherein the processing is accomplished by a low-pressure plasma, by excitation of a reaction fluid with microwave electromagnetic waves, and wherein the container is placed in an enclosure 10 made of conductive material, inside of which enclosure, the microwaves are introduced by means of a coupling device, characterized in that the enclosure is a cylinder generated by rotation around a main axis of the container, in that the coupling device has a wave guide tunnel 38 which extends in a direction perpendicular to the axis of the enclosure, and the inside diameter of the enclosure is such that the microwaves are propagated in the enclosure primarily according to a mode in which the electrical field, resulting from the propagation of the

Art Unit: 1763

microwaves has an axial symmetry generated by rotation; and introducing the reaction fluid into the container in such a way that the processing can be applied to the inner face or the outer face of the container, and wherein in the inside of the enclosure, a cavity is delimited by a wall 12 made of a material that is transparent to the microwaves, and the container is received inside the cavity (see, for example, the abstract and figs. 1-3 and their descriptions).

Leprince et al. is applied as above but does not expressly disclose that the wave guide tunnel has a rectangular cross section and opens into one wall thereof in the shape of a window which, in projection on a plane tangent to the enclosure, is rectangular in shape, the smaller dimension of which rectangle corresponds to its dimension along the direction of the axis of the enclosure. However, the configuration of the claimed wave guide is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed wave guide is significant.

Additionally, Leprince et al. further discloses that the frequency of the microwaves is 2.45 GHz, but does not expressly disclose the claimed inside diameters of the enclosure and the claimed variations of intensity of the electrical field. However, a prima facie case of obviousness still exists because it would have been an obvious choice of design to one of ordinary skill in the art to optimize the dimensions of the enclosure during routine experimentation depending upon, for example, the object to be processed and the coupling mode required, and the limitation would not lend patentability to the instant application absent the showing of unexpected results.


Furthermore, the claimed variations of the intensity of the electrical field will be achieved depending on the dimension of the enclosure.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 571-272-1430. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Luz L. Alejandro  
Primary Examiner  
Art Unit 1763

March 15, 2005